# Claims

What is claimed is:

1. A method comprising:

   receiving a requested location;

   selecting, based on the requested location, a first pre-existing map tile and its
   
   corresponding miniaturized representation from a plurality of preexisting map
   
   tiles and their corresponding miniaturized representations, the first pre-
   
   existing map tile containing a representation of an area that comprises the
   
   requested location;
   
   selecting further a first set of adjacent map tiles and their corresponding
   
   miniaturized representations from the plurality of preexisting map tiles and
   
   their corresponding miniaturized representations, the first set of adjacent map
   
   tiles containing representations of areas immediately adjacent to the area
   
   represented by the first map tile, and
   
   sending the selected first map tile, the miniaturized representation of the first map
   
   tile, the first set of adjacent map tiles, and the miniaturized representations of
   
   the first set of adjacent map tiles.

2. The method of claim 1 further comprising sending processing logic to form a mini

   map and a visibility area demarcation within the mini map, using said
   
   miniaturized representations of the map tiles, the visibility area demarcation

4      denoting an area within the mini map corresponding to the area represented by the

5      first map tile.

6

1   3. The method of claim 1 further comprising

2      selecting a second set of adjacent map tiles and their corresponding miniaturized

3        representations from the plurality of preexisting map tiles and their

4        corresponding miniaturized representations, the second set of adjacent map

5        tiles containing representations of areas immediately adjacent to the area

6        represented by the first set of adjacent map tiles;

7     sending the second set of adjacent map tiles and their corresponding miniaturized

8        representations.

1   4. The method of claim 1 wherein the requested location comprises a street address.

1   5. The method of claim 1 wherein the requested location comprises a longitude and a

2   latitude.

1   6. The method of claim 1 wherein the set of adjacent map tiles comprises:

2      a plurality of graphical image of the areas immediately adjacent to the area

3        represented by the first map tile.

1   7. The method of claim 1 further comprising sending information describing a visible

2   area to be displayed, the visible area comprising selected portions of the areas represented

3   by the set of first adjacent map tiles and the selected first map tile.

1  8.  A method comprising:

2        receiving a set of one or more preexisting map tiles along with corresponding

3            miniaturized representations of the map tiles, from a server, for display, each

4            map tile in the set of one or more preexisting map tiles comprising at least a

5            graphical image representing an area, with one map tile comprising a

6            graphical image representing an area comprising a requested location, and the

7            other map tiles comprising graphical images representing areas immediately

8            adjacent to the area comprising the requested location;

9        forming a mini-map using said miniaturized representations of said map tiles; and

10       displaying for a user, a map for an area within the areas represented by the set of

11           one or more preexisting map tiles and a mini map with the area corresponding

12           to the displayed map denoted thereon.


1  9. The method of claim 8 further comprising:

2        receiving, from a user, a request to move in a direction relative to the area of the

3            displayed map, the request being provided by the user interacting with the

4            mini map; and

5        refreshing the displayed map to display a new area reflective of the requested

6            move.


1  10. The method of claim 9 further comprising sending a request for additional map tiles

2  and their miniaturized representations, the additional map tiles representing additional

3  areas in the direction of the requested move.

1    11. An apparatus comprising:

2        storage medium having stored therein a plurality of executable instructions, wherein

3    when executed, the instructions operate the apparatus to

4            receive a requested location,

5            select, based on the requested location, a first pre-existing map tile and its

6                corresponding miniaturized representation from a plurality of preexisting map

7                tiles and their corresponding miniaturized representations, the first pre-

8                existing map tile containing a representation of an area that comprises the

9                requested location,

10        select further a first set of adjacent map tiles and their corresponding miniaturized

11            representations from the plurality of preexisting map tiles and their

12            corresponding miniaturized representations, the first set of adjacent map tiles

13            containing representations of areas immediately adjacent to the area

14            represented by the first map tile, and

15        send the selected first map tile, the miniaturized representation of the first map

16            tile, the first set of adjacent map tiles, and the miniaturized representations of

17            the first set of adjacent map tiles; and

18

19    at least one processor coupled to the storage medium to execute the instructions.

20            .

1    12. The apparatus of claim 11, wherein the executing instructions further operate the

2    apparatus to

3        select a second set of adjacent map tiles and their miniaturized representations

4            from the plurality of preexisting map tiles and their miniaturized

5            representations, the second set of adjacent map tiles containing representations

6            of areas immediately adjacent to the areas represented by the first set of

7            adjacent map tiles, and

8        send the second set of adjacent map tiles and their corresponding miniaturized

9            representations.


1    13. An apparatus comprising:

2    storage medium having stored therein a plurality of executable instructions, wherein

3    when executed, the instructions operate the apparatus to

4        receive a set of one or more preexisting map tiles along with corresponding

5            miniaturized representations of the map tiles, from a server, for display, each

6            map tile in the set of one or more preexisting map tiles comprising at least a

7            graphical image representing an area, with one map tile comprising a

8            graphical image representing an area comprising a requested location, and the

9            other map tiles comprising graphical images representing areas immediately

10            adjacent to the area comprising the requested location,

11        form a mini-map using said miniaturized representations of said map tiles; and

12    display for a user, a map for an area within the areas represented by the set of one

13        or more preexisting map tiles and a mini map with the area corresponding to

14        the displayed map denoted thereon; and

15

16    at least one processor coupled to the storage medium to execute the instructions.

1    14. The apparatus of claim 13, wherein the executing instructions further operate the

2    apparatus to

3        receive, from a user, a request to move in a direction relative to the area of the

4            displayed map, the request being provided by the user interacting with the

5            mini map; and

6    refresh the displayed map to display a new area reflective of the requested move.

1    15.    A method comprising:

2        displaying a map for an area within a greater area;

3        displaying a mini map representative of the greater area;

4        displaying a visibility demarcation denoting an area within the mini map

5            corresponding to the area of the displayed map; and

6        facilitating user interaction with the visibility demarcation to facilitate user

7            panning of the greater area.

1    16.    The method of claim 15 further comprising refreshing the displayed map

2            responsive to user movement of the visibility demarcation within the mini

3            map.

1   17.   The method of claim 15 further comprising updating the greater area

2         represented by the mini map responsive user movement of the visibility

3         demarcation within the mini map.

1   18.   The method of claim 17 further comprising maintaining the visibility

2         demarcation substantially at the center of the mini map.

1   19.   An apparatus comprising:

2         storage medium having stored thereon programming instructions, when executed,

3         operate the apparatus to

4               display a map for an area within a greater area,

5               display a mini map representative of the greater area,

6               display a visibility demarcation denoting an area within the mini map

7                     corresponding to the area of the displayed map, and

8               facilitate user interaction with the visibility demarcation to facilitate user

9                     panning of the greater area; and

10        at least one processor coupled to the storage medium to execute the programming

11              instructions.

1   20.   The apparatus of claim 15, wherein the programming instructions, when

2         executed, further operate the apparatus to refresh the displayed map

3         responsive to user movement of the visibility demarcation within the mini

4         map.

1   21.   The apparatus of claim 15, wherein the programming instructions, when

2         executed, further operate the apparatus to update the greater area represented

3    by the mini map responsive user movement of the visibility demarcation

4    within the mini map.

1    22.    The apparatus of claim 15, wherein the programming instructions, when

2    executed, further operate the apparatus to maintain the visibility demarcation

3    substantially at the center of the mini map.

1    23.    A method comprising:

2    providing mapping data to client to enable the client to display a map for an area

3    within a greater area;

4    providing miniaturization data corresponding to the mapping data to enable the

5    client to display a mini map representative of the greater area; and

6    providing instructions to the client to enable the client to display a visibility

7    demarcation denoting an area within the mini map corresponding to the area

8    of the displayed map, and facilitate user interaction with the visibility

9    demarcation to facilitate user panning of the greater area.

1    24.    The method of claim 23 further comprising providing additional mapping data

2    to the client to enable the client to update the greater area represented by the

3    mini map in response to user movement of the visibility demarcation within

4    the mini map.

1    25.    An apparatus comprising:

2    storage medium having stored thereon programming instructions, when executed,

3    operate the apparatus to

4    provide mapping data to a client to facilitate the client to display a map for

5    an area within a greater area,

6       provide miniaturization data corresponding to the mapping data to

7           facilitate the client to display a mini map representative of the greater

8           area, and

9       provide instructions to the client to enable the client to display a visibility

10          demarcation denoting an area within the mini map corresponding to

11          the area of the displayed map, and facilitate user interaction with the

12          visibility demarcation to facilitate user panning of the greater area; and

13      at least one processor coupled to the storage medium to execute the programming

14          instructions.

1   26.  The apparatus of claim 25, wherein the programming instructions, when

2           executed, further operate the apparatus to refresh the displayed map

3           responsive to user movement of the visibility demarcation within the mini

4           map.

5   27.  The apparatus of claim 15, wherein the programming instructions, when

        executed, further operate the apparatus to provide additional mapping data to

        the client to enable the client to update the greater area represented by the

        mini map in response to user movement of the visibility demarcation within

        the mini map.

10